

WHAT IS CLAIMED:

- 1 1. A method of inhibiting growth of a tumor cell, which method comprises
2 inhibiting transcriptional activity of ATF2.
- 1 2. The method of claim 1, wherein inhibiting the transcriptional activity of ATF2
2 comprises introducing a polypeptide comprising an N-terminal antagonist fragment of ATF2 into
3 the tumor cell.
- 1 3. The method of claim 2, wherein the N-terminal fragment of ATF2 comprises
2 amino acid residues from about residue 50 of ATF2 to about 100 of ATF2.
- 1 4. The method of claim 3, wherein the N-terminal fragment of ATF2 comprises
2 amino acid residues from about residue 50 of ATF2 to about 100 of ATF2.
- 1 5. The method of claim 2, wherein the introducing the polypeptide comprising an
2 N-terminal antagonist fragment of ATF2 into the tumor cell comprises introducing an expression
3 vector encoding the polypeptide into the tumor cell under conditions that permit expression of
4 the polypeptide from the vector.
- 1 6. The method of claim 5, wherein N-terminal fragment of ATF2 comprises
2 about a 30 amino acid fragment of ATF2 comprising from about amino acid residue 45 to about
3 amino acid residue 100.
- 1 7. The method of claim 5, wherein the N-terminal fragment of ATF2 comprises
2 about a 50 amino acid fragment of ATF2 comprising from about amino acid residue 50 to about
3 amino acid residue 100.
- 1 8. The method of claim 1 wherein the tumor cell is a melanoma tumor cell.

- 2 9. The method of claim 1, wherein the tumor cell is a breast cancer tumor cell.
- 1 10. The method of claim 1, further comprising treating the tumor cell with a
2 chemotherapeutic agent.
- 1 11. The method of claim 10, wherein the chemotherapeutic agent is selected from
2 the group consisting of a p38 inhibitor, UCN-01, NCS, anisomycin, LY294002, PD98059,
3 AG490, and SB203580.
- 1 12. The method of claim 1, further comprising treating the tumor cell with
2 radiation.
- 1 13. A polypeptide comprising an inhibitory ATF2 N-terminal fragment.
- 1 14. The polypeptide of claim 13, wherein the fragment has a sequence consisting
2 of from about amino acid residue 50 to about amino acid residue 100 of ATF2.
- 1 15. The polypeptide of claim 13, further comprising a translocation peptide
2 sequence.
- 1 16. A nucleic acid encoding a polypeptide comprising an inhibitory ATF2 N-
2 terminal fragment, which N-terminal fragment comprises a sequence from about amino acid
3 residue 50 to about amino acid residue 75 of ATF2.
- 1 17. The nucleic acid of claim 16 encoding a polypeptide wherein the N-terminal
2 fragment comprises from about amino acid residue 45 to about amino acid residue 100 of ATF2.
- 1 18. An expression vector comprising the nucleic acid of claim 16 operably
2 associated with an expression control sequence.

1 19. The expression vector of claim 18, wherein the expression control sequence
2 provides for expression in a tumor cell.

1 20. A pharmaceutical composition comprising the polypeptide of claim 13 and a
2 pharmaceutically acceptable carrier or excipient.

1 21. A pharmaceutical composition comprising the polypeptide of claim 15 and a
2 pharmaceutically acceptable carrier or excipient.

1 22. A pharmaceutical composition comprising the expression vector of claim 18
2 and a pharmaceutically acceptable carrier or excipient.

1 23. A method of treating a tumor in a subject, which method comprises
2 administering therapeutically effective amount of the pharmaceutical composition of claim 20,
3 21, or 22 to the subject.

1 24. The method of claim 23 wherein the tumor is a melanoma tumor.

1 25. The method of claim 23, wherein the tumor is a breast cancer tumor.

1 26. The method of claim 23, further comprising treating the tumor with a
2 chemotherapeutic agent.

1 27. The method of claim 26, wherein the chemotherapeutic agent is a p38
2 inhibitor.

1 28. The method of claim 26, wherein the chemotherapeutic agent is selected from
2 the group consisting of UCN-01, NCS, anisomycin, LY294002, PD98059, AG490, and

3 SB203580.

1 29. The method of claim 23, further comprising treating the tumor with radiation.

1 30. A method for identifying a compound that modulates ATF2 activity, which
2 method comprises determining the level of expression of a reporter gene in a cell comprising the
3 reporter gene operatively associated with an ATF2-regulated expression control sequence
4 contacted with a compound under conditions in which ATF2 would induce expression of the
5 reporter gene in the absence of the compound, and comparing the level of expression of the
6 reporter gene in the presence of the compound to the level of expression in the absence of the
7 compound, wherein a difference in the level of expression of the reporter gene indicates that the
8 compound modulates ATF2 activity.

1 31. The method of claim 30, wherein the level of reporter gene expression in the
2 presence of the compound is less than in the absence of the compound, wherein the compound
3 inhibits ATF2 activity.

1 32. The method according to claim 31, wherein the compound is a polypeptide.